

*In January 1999, the Social Security Advisory Board convened the 1999 Technical Panel on Assumptions and Methods—the first established by the Advisory Board since its creation and the first since 1995. The Panel met from January to September 1999. As is traditionally done, the Board asked the Panel to review the economic and demographic assumptions and the methods used to project the status of the Old-Age, Survivors, and Disability Insurance Trust Funds.*

## **Summary of the 1999 Technical Panel Report on Assumptions and Methods**

The 1999 Technical Panel of expert actuaries, economists, and demographers appointed by the Social Security Advisory Board is charged with providing technical assistance to the Board by reviewing the assumptions and methodology used by the Board of Trustees of the Old-Age, Survivors and Disability Insurance Trust Funds to project the future financial status of the funds. Specifically, the Panel is asked to:

- Review key economic assumptions: productivity and labor force participation, real wage growth, and the real interest rate and provide expert opinion regarding the interaction of changes in the Consumer Price Index (CPI) with other economic assumptions.
- Review the assumptions regarding key demographic factors: in particular, mortality; but also fertility, immigration, and disability incidence and duration.
- Provide expert opinion regarding expected growth in equity markets, projected return on equity investments, and effects of possible investments of Social Security funds on equity markets and the national economy.
- Review current forecasting methods. Address concerns about the internal consistency of the Alternative I and III assumptions. Provide expert opinion regarding alternative modeling methodologies that may best illustrate the probability of variations around the central projections.

The Introduction and Executive Summary sections are presented here. The full report is available on the internet:

[<http://www.ssab.gov>](http://www.ssab.gov).

Or, for a copy, you may write to:

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### ***I. Introduction***

In 1999, the Board of Trustees of the Old-Age, Survivors, and Disability Insurance Trust Funds (OASDI) once again reported that Social Security remained out of balance for the long term. Revenues are projected to be insufficient to meet promises of growing benefits under current law. Because of that imbalance, the Social Security Administration (SSA) has been called upon to examine a variety of reform options. The reports on those options, many other SSA documents, and the Trustees Report itself have increasingly come under the spotlight. After all, SSA serves as perhaps the most vital source of information for the public and its elected representatives in seeking to gauge for themselves the extent of any problems, the influence of different economic and demographic conditions on those problems, and the viability of the proposed solutions.

In recent years the Office of the Chief

Actuary (OACT) has been called upon to provide estimates for reform proposals that involve the investment of Social Security funds in private equities. In light of this significant expansion of OACT's traditional responsibilities, the actuaries advised the Board that it would be helpful to have the views of outside experts on the assumptions and methods that should be used in estimating those proposals. Accordingly, the Board included in the charter for the 1999 Technical Panel a request that the Panel provide expert opinion regarding expected effects of investment of Social Security funds in equities. Stanford G. Ross, Chair of the Board, emphasized the importance of addressing issues related to both current law and reform proposals. The Panel's report thus includes recommendations that go beyond the evaluation of the existing system in which Trust Fund reserves are invested in government bonds.

The Panel's recommendations centered around the following findings:

- *Under current law, OASDI may be more out of balance than currently projected under intermediate assumptions.* This is largely because of a conservative estimate of improvements in life expectancy. But it also reflects a law that has been designed in such a way that the ability to meet the growing cost of its promised benefits is highly sensitive to economic and demographic conditions.
- *Some vital pieces of information describing current law are missing in the Trustees Report, and some current presentations at times lead to misunderstanding.* Despite a commendable job of putting out information, the Trustees Report needs to inform the public of such issues as the lifetime value of benefits promised under current law, alternative measures of unfunded obligations, and the predicted growing prevalence of disability insurance receipt within almost all age groups. Also, tables on life expectancy in the Trustees Report use a technical measure that can easily be misinterpreted to indicate that estimated life expectancy (and number of years of benefits) is less than it is actually projected to be for different cohorts. Finally, the Trustees Report presents levels of future benefits that might not materialize under current law even in the absence of reform.
- *The public has been unable to obtain many essential pieces of information that would help it weigh the relative merits of alternative reform proposals.* SSA has been moving heroically to try to meet the demands for analyses of alternative reforms, but major holes still exist. For example, SSA cannot fully evaluate the impact of proposals on predicted poverty levels of future retirees, and on whether the reforms would make promises even more sensitive to changing economic and demographic conditions. Some proposals, such as those that try to improve fairness in the design of spousal benefits, cannot even be included in congressional proposals because cost estimates and distributional consequences are unavailable. No comprehensive standard has been set for comparing proposals

and their impact on the government's budget as a whole or even stating their basic parameters in a consistent manner. Responding to this concern goes far beyond the responsibilities of the Office of the Chief Actuary, to the rest of SSA, and to such offices as the Office of Management and Budget and the Congressional Budget Office.

- *New types of methodologies and models are required to meet today's information requirements.* SSA has been making strides in this area recently, but the need is great. Newer models would make it possible to assess better the impacts of alternative designs on distribution, on assessing the uncertainty or sustainability of any law, on the total budget of the United States, and on saving and labor supply.
- *A special challenge is presented by proposals that would involve investment in equities by individuals or by the Trust Funds.* The 1999 Panel was the first to review the methods adopted by SSA to date in the area of equity investment. It concludes that the assumption on the equity premium (return on stocks over return on bonds) used by the Office of the Chief Actuary should be lowered in the current economic environment. Furthermore, it is especially important not to show high returns for equity investment through additional borrowing without any assessment of the new risks that are involved.
- *A clear appraisal of the required resources is necessary if these challenges are to be met.* This requirement extends to all the offices and agencies responsible for assessing Social Security programs and policies within and outside the Social Security Administration.

### ***Economic and Demographic Projections Under Current Law***

The Panel's first task was to review the economic and demographic assumptions and methods currently in use. That has been the traditional role of this type of panel. In basic respects, the Panel strongly supports the work of OACT. In a few areas, however, the Panel recommends change. First, it concurs with many demographers in noting that projections of life expectancy by OACT are unduly pessimistic, and that mortality rates will likely decline even more than estimated. Second, it believes that the estimated future increase in real earnings of workers tends to be understated, although the issue is still open as to just how different tomorrow's economy will be from that of yesterday. Third, it suggests that real interest rates on government securities are likely to be somewhat lower in the future than currently assumed.

Largely because of the suggested changes in mortality rates, the net effect of the changes would worsen the measured actuarial imbalance of the present system. Longer lives imply more years of Social Security benefits with only a partially offsetting rise in revenues, because the current system does not increase the normal retirement age (NRA) as life expectancy increases.

## ***The Presentation of Information on Current Law***

The Trustees Report helps give Congress sufficient advance notice of any large actuarial imbalance so that it has adequate time to consider the merits of alternative ways of restoring balance. In that regard, it has done a commendable job—one that might be emulated by other programs and agencies that do not attempt to undertake such long-term projections. But the Panel felt that improvements are needed in the presentation of information. The important issue here is that the information conveyed be complete and avoid inadvertently misleading the public and policymakers. For example, do projections under high-cost and low-cost assumptions adequately display the uncertainty of the projections? Are they meaningful? Do they convey how the projections might change in response to different economic and demographic circumstances?

The Panel believes that a modest amount of additional information should be included in the Trustees Report. Suggestions include the lifetime value of benefits provided to different cohorts, the projected prevalence of Disability Insurance receipt in the population as a whole and by age, and alternative measures of the actuarial obligations and unfunded liabilities of the system. In some of these cases, SSA already makes the calculations; in others, it can easily do so. The Panel also recommends that a more thorough documentation of methods and assumptions be provided by SSA, and a separate report by one panel member, Edward W. (Jed) Frees, will be made available as a first approach at such an effort.

At the same time, some items are reported in a way that has led to misunderstanding among the public and elected officials. Thus, the technical measure of life expectancy reported in the Trustees Report—although useful for some analytical purposes—does not reflect the life expectancy of upcoming cohorts of retirees. Tables showing growth in annual benefit levels over time do not demonstrate that succeeding cohorts' lifetime benefits are growing even faster than their annual benefit levels because they will receive more years of benefits by living longer. The Report shows promises of benefits under a legislated formula for benefit growth over time, but the law is simultaneously unclear how such benefits could be paid when the Trust Funds run out of money. A more balanced presentation of alternative benefit and tax streams, therefore, is required to reflect current law. Thus, as the Trustees Report moves from a document used primarily by some technical analysts to one that is used by the broader public to understand the system, it needs to better accommodate their needs.

## ***A New Environment***

Making projections of the Social Security system under current law is only one piece of the work facing analysts today. In the past few years, the Office of the Chief Actuary within SSA has been called upon to make a variety of estimates based on varying proposals for reform. Possible reforms include changes to the benefit formula, the distribution of benefits among different recipients, the retirement age, the tax structure, and the types

of securities purchased by the Trust Funds. Other reforms establish individual accounts funded by contributions and invested in a variety of assets, including equities.

In assessing the reform proposals, SSA and other parts of government are being asked for a new and different level of information as they evaluate those proposals. Although SSA has been working diligently to try to fulfill the new requirements, many of the efforts are still at an elementary stage. As a consequence, when advising on a variety of policy proposals to date, some vital chores cannot be performed. For example, neither SSA nor the rest of government is able to assess the impact on all revenues of government (rather than just the Social Security Trust Funds). In addition, SSA is unable to examine a variety of behavioral impacts on work and saving, show the possible distributional impacts and the effect on poverty, demonstrate under reasonable assumptions the extent to which various reforms increase or decrease the *probability* of being out of actuarial balance by any given amount, or even estimate the actuarial impact of reforms that would change rules for spouses (such as providing more equal benefits for all married couples with the same level of earnings and taxes paid). Its current models do not address those issues in a satisfactory way.

Those are crucial matters. Without such assessments, a proposal that improved actuarial balance but increased the unified budget deficit might appear superior to one that did less for actuarial balance but reduced the unified budget deficit. One that tended to favor increased work or saving might not be credited with an impact on future government revenues. A proposal that reduced the poverty rate overall might be assessed as hurting the poor because one aspect of the proposal by itself did not improve their prospects. A reform might look good because it reduced the actuarial imbalance under intermediate assumptions, but no one would know that it actually increased the probability of being several percentage points of payroll out of balance in the future. And, as has already occurred, proposals that by some standards might improve the fairness of the system in the way it treats different couples with the same level of earnings could not be fairly considered in the context of a complex proposal with many interrelated provisions because the impact of changing the related spousal benefit provisions could not be estimated. SSA is currently working on new methods to fill this need.

## ***The Types of Models That Are Needed***

Evaluation of reform proposals requires a variety of high-powered models. One type of modeling would carefully account for different types of individuals according to income level, work history, or family status. Such models can better display the distributional consequences of reform proposals. For example, many current models are inadequate when evaluating a policy that might provide a choice among a minimum benefit, a new type of spousal benefit, or a benefit based on the worker's own earnings. Only with newer models can the full implications of the proposals be estimated.

### ***Technical Panel on Assumptions and Methods***

#### ***Chair:***

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Other modeling efforts would better allow an assessment of uncertainty. Improvements would help demonstrate the level of uncertainty under current law as well as assess the robustness or sustainability of any system to changing economic and demographic conditions.

Still other efforts would attempt to reflect the impact of reforms on different parts of the federal budget as well as on household earnings and returns from saving. Less elaborate models can ensure at least some consistency among economic variables. In sum, these models are intended to provide better guidance on the consequences of steering the ship in a different direction, not merely giving notice that it may be on a collision course.

#### ***Investment in Equities***

One of the most complicated of all matters in many newer reform proposals is investment in assets other than government bonds, either directly by the Social Security Trust Funds or by individuals within personal or individual accounts. Once the Office of the Chief Actuary began

estimating the effects of proposals with those types of changes, it had to adopt new methods and assumptions. The Panel, therefore, undertook a first review of the methods and assumptions underlying investment issues. The Panel believes that such a review should become standard for future panels or ongoing task forces established by the Advisory Board.

Among the Panel's recommendations in the area of investments is a moderate decrease in the expected premium for ownership of stocks over bonds. In addition, the Panel remains concerned that any equity investment be analyzed in a broader model that takes into account other changes in the economy. Those changes could include the effects on risk-bearing of a shift in asset ownership (e.g., the government owns more equities but the public owns more government bonds and less equities), the impact on interest rates arising from sales of government bonds, and the potential impact on net saving in the economy.

The Panel also warns about presentations that derive from arithmetic calculations that tend to show that "financial arbitrage"—borrowing to purchase equities with a higher expected

rate of return—creates some sort of free lunch. To properly balance the presentation, various assessments of risk must be undertaken at the same time. While there is no easy way to do this, several options are suggested ranging from simple to more complex.

The Panel has prepared a tentative list of assumptions that should be stated and analyses that should be applied *consistently* to all proposals and to current law. By adopting such a standardized list, SSA can minimize the chance of unintentionally favoring one type of proposal over another, as well as indicate to policymakers the types of questions and issues that will need to be addressed when trying to design any broad-based reform.

### The Resources Required

Although many of these issues require research by other parts of government, such as the Office of Management and Budget, the Department of the Treasury, the Congressional Budget Office, the Joint Committee on Taxation, the Congressional Research Service, and the General Accounting Office, we believe that the Social Security Administration is in the unique position of having the information, expertise, and integrity to significantly inform the debate. Because of its unique position, however, demands on the agency for information and analysis are escalating. The Panel strongly recommends that resources be made available to enhance SSA’s ability to provide analysis in a way that best informs the public; incorporates such considerations as uncertainty, distributional consequences, and risk; and allows for consistent comparison of alternatives. At the same time, the other government agencies must also begin to catch up on their own responsibilities—such as showing the budgetary impact of alternative reforms.

When one considers that reform will likely affect almost every individual retiring in the future and likely will shift trillions of

dollars’ worth of benefits and taxes over the next few decades, these efforts to enhance research and analysis capabilities could be greatly beneficial to the public.

## II. Executive Summary

### The Standard Assumptions Used to Evaluate Current Law

The Panel recommends a number of changes to the actuarial assumptions underlying the Trustees Report . In each case, the Panel was guided by trying to assess the best information available to it, regardless of the impact on actuarial balance. *The largest changes recommended—in terms of their impact on actuarial balance—were to increase projections of life expectancy and real earnings growth, and to decrease the real interest rate on government securities* (see table 1). The first and last would decrease actuarial balance, the middle one increase it, with a net impact of worsening the actuarial deficit by about 0.5 percent of taxable payroll. At the same time, the Panel recognizes the uncertain nature of any projection based on the uncertainty surrounding the economy and the future demographic characteristics of the population. Several of its later suggestions would attempt to demonstrate how the sensitivity of the program to alternative assumptions is affected by different legal designs, such as indexing for life expectancy, prices, or wages.

Despite the variety of recommendations made here, the Panel strongly supports the various modeling efforts that underlie the Social Security projections. Following the recommendations would improve a process that has strong underpinnings and, indeed, is the envy of much of the rest of the world.

*Real Wage Differential.*—*The real wage differential*, or the long-term assumed rate of real annual growth in the average annual wage in covered employment, *should be raised by 0.2 percentage point to 1.1 percent*. The growth rates for the low- and high-cost options should be raised by equivalent amounts. At this time, the Panel recommends an increase of 0.1 in the assumed rate of growth of long-term productivity, with the remaining 0.1 being allocated to changes in the linkages between productivity growth and the real wage differential (such as hours worked and the share of employee compensation directed to wages). However, the Panel acknowledges significant uncertainty both as to the level of future productivity and our ability to measure it consistently in an economy placing increasing emphasis on services, information, and quality.

*Fertility.*—The Panel recommends no change in the assumed long-term fertility rates. However, the shifting composition of the population suggests that the Trustees should continue to monitor fertility rates closely.

*Mortality.*— Based upon long-term trends and international comparisons, the Panel recommends that greater improvements in mortality be integrated into the intermediate assumptions. *Projected life expectancy at birth in 2070 should be raised to the level currently projected for the high-cost as-*

Table 1.—Effect of Panel's recommended changes in the Assumptions

(Change in OASDI actuarial balance and annual balance as a percent of taxable of taxable payroll)

Item	Change in actuarial balance	Actuarial balance for 75-year period	Annual balance for 75th year
1999 Trustees Report actuarial balance.....		–2.07	–6.44
Increase ultimate rates of mortality decline.....	–0.51		
Raise real wage differential.....	+20		
Lower return on government securities.....	–20		
Panel-recommendation actuarial balance (including interactions among recommended changes.....		–2.60	–7.70

Source: Office of the Chief Actuary, Social Security Administration.

*assumptions, 3.7 years above the current intermediate projection.* The Panel recommends maintaining the age distribution of the rates of decline in mortality the same as was assumed for the intermediate assumptions in the 1999 Trustees Report. Those rates of decline are fairly similar across the adult ages, rather than slower at advanced ages as in the historical record. The current spread between the low- and high-cost assumptions should be maintained around the new intermediate assumptions.

*Immigration.*—The Panel suggests that the range between the low-cost and high-cost assumptions should increase to perhaps plus or minus 50 percent of the intermediate assumptions.

*Return on Government Bonds.*—The Panel recommends using a real annual interest rate of 2.7 percent in both the short- and long-term projection periods for the government bonds purchased by the OASDI Trust Funds. The current intermediate assumption is 3.0 percent. We recommend a high-cost rate of 2.0 percent and a low-cost rate of 3.5 percent.

### **Further Recommendations**

The Panel made a variety of recommendations regarding additional economic and demographic variables, investment issues, the ways that data and information are presented, and the types of modeling efforts needed to make better and more informative projections.

#### **Economic and Demographic Issues**

*Labor Force Participation.*—The projected labor force participation rates of both older men and older women should be examined carefully (projected rates for older women appear low relative to older men). *Further model development is needed to deal explicitly and consistently with many types of reforms, such as further changes in the retirement age or changes in levels of benefits, that could affect those participation rates.* Also, larger variations in participation rates should be incorporated into the assumptions for the low- and high-cost projections.

*Marital Status and Benefits for Low-Income Survivors and Spouses.*—The Panel has concerns with the current projections of marital status. Benefits paid to women as spouses or survivors represent a primary method by which the current system deters poverty and near-poverty in old age. Some survey-based projections suggest that the numbers and proportion of women who will collect benefits as wives or widows could be lower than projected by the Office of the Chief Actuary, whereas the number and proportion who will be divorced and never married could be higher. If those projections are correct and the estimates by OCACT of benefits to women are overestimated, two problems arise. Not only would estimates of future actuarial costs to the Social Security system be too high, but poverty rates estimated consistently with OCACT's assumptions would be too low. Thus, poverty could rise among older women even as the system becomes more generous over time to other beneficiaries. Up-to-date surveys and modeling on this issue have

not received priority within the government as a whole, thus making more tentative any estimation done here. The Panel places a high value on investigating alternative methods and data sources that are demographically representative as support for improved projections related to marital and family status.

*Disability.*—The Panel finds the forecasts of the size and cost of the Disability Insurance program to be reasonable but recommends further work in two areas. More research is needed to understand the recent improvement in mortality rates among the DI population. And *SSA needs to devote more resources to understanding the factors causing the large fluctuations in incidence rates that have occurred in the past and to developing more detailed behavioral models that can predict the impact of changes in the DI program.*

#### **Investment Issues**

*Equity Premium.*—Evaluating the risks and returns to equity investment is critical to reform proposals that involve investing Social Security funds in publicly traded stocks. The Panel recommends that the average equity premium at this time be set to 3 percent over the assumed real rate of interest on special government bonds issued to the Trust Funds. Recent analyses by SSA have used 4 percent. However, SSA should be prepared to modify the assumed average equity premium as new insights on the size and determinants of the equity premium become available.

*Presentation of Results with "Additional" Returns Resulting from the Equity Premium.*—When examining reform proposals that involve alternative investments, as in equities, results should first be presented reflecting a government bond rate of return on those investments. Doing so will avoid the false inference that the equity premium comes with no corresponding increase in risk or other cost for society. *Calculations that explicitly incorporate the equity premium should also include a price of risk.* That can be accomplished by adjusting the discount rate used for investment cash flows, by option pricing methods, or by some other appropriately developed approach. SSA should study those alternatives and further develop and standardize the methodology used to evaluate risky investments.

*Consistency of Asset Returns with Other Variables.*—At present, the Trustees Report (as opposed to many reform proposals) does not have to make assumptions on rates of return other than on government bonds. In the future, the Panel suggests that rates of return on financial assets should be checked for compatibility with the rate of inflation, the rate of return on capital, and other relevant variables.

#### **Presentation Issues**

We suggest several areas of improvement regarding the presentation of material in the Trustees Report: the format of the Trustees Report, the use of cohort versus period life expectancy, the lifetime value of benefits (and possibly costs),

## ***Table of Recommendations***

### ***The Standard Assumptions Used to Evaluate Current Law***

#### ***Real Wage Differential***

Raise the real wage differential from 0.9 percent to 1.1 percent. Maintain the same spread for the low- and high-cost options.

#### ***Fertility***

Maintain the currently assumed rates, and continue close monitoring.

#### ***Mortality***

Accelerate the improvement in the mortality rate so that life expectancy at birth in 2070 is 3.7 years higher than under the current intermediate assumption. Maintain the current spread between low- and high-cost options.

#### ***Immigration***

Increase the spread to plus or minus 50 percent of the intermediate assumption.

#### ***Return on Government Bonds***

Reduce the real annual interest rate from 3.0 percent to 2.7 percent. Use 2.0 and 3.5 as the high-cost and low-cost rates.

### ***Further Recommendations***

#### ***Economic and Demographic Issues***

- Labor force participation rates should be varied more across low-cost, intermediate, and high-cost scenarios.
- Methods for estimating the marital status of future beneficiaries, the labor force participation rates of older workers, the rate of mortality improvement among the Disability Insurance population, and the underlying causes of receipt of Disability Insurance need further development.

#### ***Investment Issues***

- For investments in stocks, assume an equity premium of 3 percent over the real interest rates on Social Security's bond investments.
- The value or "cost" of the risk associated with equity investment should be displayed and estimated.
- Rates of return on financial assets should be consistent with other economic variables.

#### ***Presentation Issues (for the Trustees Report and elsewhere)***

- The format can be improved to allow easier access and understanding.

- The uncertainty of projections should be displayed more clearly and in ways that reflect better the relationship of that uncertainty to the design of the law.
- Cohort life expectancy should be shown (period life expectancy, as now shown, is easily misunderstood).
- The lifetime value of benefits (and possibly taxes) for various types of workers over time should be displayed.
- Alternative estimates of the unfunded obligations of the Social Security system should be presented in the Trustees Report.
- Traditional definitions of "typical workers"—low and average earners—result in an overstatement of the lifetime income and benefits of the typical low-income and average-income worker and should be revised.
- Less emphasis should be placed on the 75-year actuarial balance and more on long-term sustainability (as reflected, for instance, in balance during the last part of the projection period).
- Benefits under existing tax rates and taxes under existing benefit rates should be presented to better reflect consequences of current law.
- Prevalence rates for Disability Insurance, not just incidence rates of new awards, should be displayed.

#### ***Methodology and Models***

- A published consistent set of criteria is recommended for comparing reform proposals and current law.
- General equilibrium modeling is necessary for consistency and to understand interactions.
- Models (microsimulation) to demonstrate distributional effects, as well as to estimate better those features influenced heavily by distributional factors, are necessary and must be enhanced significantly.
- Greater public access to Social Security information should be encouraged.
- Ongoing technical review of several issues is necessary.
- Modeling capabilities (stochastic modeling) are necessary to display uncertainty and the effect of policy on that uncertainty.
- Estimation methodology would benefit from new techniques to reflect consistency among variables.



sustainability along with 75-year balance, and the prevalence of disability.

**Format of Trustees Report.**—Several changes to the format of the Trustees Report would help readers understand and interpret the data. The Report should be produced in a manner that provides immediate cross references (including point and click references in an electronic version) to the Summary Report, as well as to backup material in other reports such as Actuarial Reports and SSA distributional analyses. Also, graphs should more clearly illustrate the uncertainty that surrounds the 75-year forecast, particularly in distant years.

**Illustrating Uncertainty.**—*The Trustees Report should use techniques to illustrate that much of the uncertainty in projections can be reduced by targeting policy to specific objectives, such as adjusting for increases in life expectancy so as not to throw the system out of balance. Uncertainty in projections can also be reduced by automatically adjusting benefit or tax formulas over time to reflect actual economic and demographic outcomes.*

**Cohort Versus Period Life Expectancy.**—*The Report should present cohort life expectancy in addition to period life expectancy, as many readers mistakenly believe that the period life expectancy indicates projected life expectancy for particular cohorts at retirement age.*

**Lifetime Value of Benefits.**—*We recommend that the Trustees Report place more emphasis on the lifetime values of benefits that are paid out to typical retiring beneficiaries and how they change over time from one cohort to the next. Some members are interested also in the taxes paid by various types of workers annually and over their lifetimes.*

**Alternative Projections of Benefits Under Current Law.**—*Because current law is vague as to how the full value of current law benefits could be paid when the Trust Funds are exhausted, the Trustees Report should show real annual future benefits under two scenarios. The first scenario would be current law if current benefit levels are maintained and taxes are raised. The second would be current law if current tax rates are maintained and benefits are lowered proportionately so they are just covered by current tax rates.*

**Typical Workers.**—Current projections do not explicitly take into account the significant number of zero earning years of many individuals. Research shows that almost half the retired workers actually have benefits based on their own earnings that are closer to those of the “low earner” example shown by the Office of the Chief Actuary. *The presentation in the Trustees Report and other displays should be revised to include both a typical low earner and a typical average earner, as well as a typical family, more representative of the actual population.*

**Sustainability of the Trust Funds.**—Emphasis on the 75-year actuarial balance is misleading when the imbalance tends to be greater nearer the end of the period. In such cases, *we recommend the up-front use of side-by-side comparisons that would emphasize the sustainability of the system alongside the 75-year balance.* For example, the Trustees Report could show the

tax increase required to leave the system in good shape at the end of the 75-year forecast period, perhaps by requiring that the ratio of Trust Fund assets to benefit costs be constant over the last 2 years of the forecast. In addition, the income rate, cost rate, and actuarial imbalance for the last few years (or the 75th year) should be shown side-by-side with the imbalance over 75 years.

**Unfunded Obligations.**—*The Panel recommends that information on the size of the unfunded obligations of Social Security, measured under alternative assumptions, should be included in the Trustees Report.*

**Reporting on the Distribution of Benefits.**—*SSA should make available when appropriate the distributional analysis it now undertakes. One way to bring that analysis into public view is to mention it in the Trustees Report and refer the interested reader to a specific SSA Website.*

**Disability Insurance Projections of Incidence and Prevalence.**—*The Trustees Report should show historical and projected rates of the prevalence of receipt of disability insurance over time as well as incidence, including the total rate and the total rate adjusted for age composition. In addition, likely causes of movements in the rates of prevalence and incidence should be identified.*

## Methodology and Models

**Comparing Current Law and Reform Proposals Within a Consistent Framework.**—*A common set of assumptions and criteria should be used to compare different reform proposals and current law in a consistent framework. We present a prototype set of assumptions and criteria in the main body of the Report.*

**Macro Effects of Alternative Policies.**—The Social Security system does not operate in isolation, but has effects on the government’s fiscal situation and on the economy at large. *The Social Security Administration needs a more general capability to illustrate interactions of the macroeconomy and the Social Security system, particularly with regard to saving and labor supply. Even without a fully developed model, these behavioral responses need to be treated consistently and more comprehensively across proposals.*

**Micro Models.**—*The Panel feels strongly that evaluation of economic and demographic changes, and of reform proposals, should include an analysis of behavioral and distributional effects. The Panel recommends that SSA significantly broaden its newly emerging capability to use and integrate microsimulation-based forecasts of the distribution of future incomes and Social Security outcomes, and that distributional results be presented regularly for different types of reform options. In many cases, actuarial costs (e.g., of alternative spousal benefit structures) cannot be made accurately without such models. An outside board of experts should examine the structure of the microsimulation models and evaluate the purposes for which their predictions will be most useful.*



*Public Access and Future Advisory Efforts.*—Improving the information flow regarding Social Security projections is strongly urged. *We recommend that the SSA Office of the Chief Actuary be given the resources needed to document further the current projection system.* In addition, we suggest creating ongoing advisory groups on specific issues such as investment assumptions, or perhaps an ongoing technical panel review.

*Evaluating the Precision of Projections.*—The Panel discussed at length how best to evaluate and illustrate the uncertainty of long-term projections. The Panel recommends development of a model that is a stochastic counterpart to the model currently used to forecast financial solvency. *The model should be used to provide some quantitative assessment to policymakers of the extent to which different policy designs reduce or increase the probability of being out of actuarial balance.* It should also be used as a tool to understand the extent to which different policy designs reduce or increase the sensitivity of Social Security to economic and demographic changes that cannot be well predicted under any model.

*Consistency Among Variables.*—Under current OCACT techniques, relationships among variables for closely related groups are often estimated separately. As a consequence, comparing the results of various equations sometimes leads to the result that relationships are not economically, demographically, or actuarially plausible, and ad hoc adjustments are required. The Panel believes that certain modern statistical and econometric techniques might help in dealing with the situation and recommends that SSA investigate such techniques.